

Technical Education Services

Autodesk® Revit® Architecture Advanced



Course Length: 4 days

This training course combines the following three training courses into one to provide users with advanced skills in Autodesk Revit Architecture.

Autodesk Revit BIM Management: Template and Family Creation (2 days)

Autodesk Revit Architecture Site and Structural Design (1 day)

Autodesk Revit Architecture Conceptual Design & Visualization (1 day)

Prerequisites:

Students should be comfortable with the fundamentals of the Autodesk® Revit® software as taught in the Autodesk Revit Architecture Fundamentals, Autodesk Revit Structure Fundamentals, or Autodesk Revit MEP Fundamentals training guide. Knowledge of basic techniques is assumed, such as creating standard element, copying and moving elements, and creating and working with views, etc.

For the current course
schedule and to register
for this course:

Web: redstack.com.au

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Autodesk® Revit® Architecture Advanced

DAY 1-2: Autodesk® Revit® BIM Management: Template and Family Creation

Building Information Modeling (BIM) is an approach to the entire building life cycle. Autodesk® Revit® Architecture, Autodesk® Revit® MEP, and Autodesk® Revit® Structure are powerful BIM programs that support the ability to coordinate, update, and share design data with team members throughout the design, construction, and management phases of a building's life. A key component in managing the BIM process is to establish a company foundation for different types of projects by creating standard templates and custom elements. Having this in place makes the process of any new project flow smoothly and efficiently.

The objective of the Autodesk Revit BIM Management: Template and Family Creation training course is to enable students who have worked with the software to expand their knowledge in setting up office standards with templates that include annotation styles, preset views, sheets, and schedules, as well as creating custom element types and families. The training course can be taught in any one or a mix of all of the software programs using practices specific to each discipline.

Students will learn how to:

- Create custom templates with annotation styles, title blocks, and custom element types
- Create schedules, including material takeoff schedules with formulas
- Create custom wall, roof, and floor types as well as MEP system families
- Set up a family file
- Create family geometry
- Create family types
- Create specific families, including, in-place families, profiles, annotation, and shared parameters

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The training course also includes additional discipline-specific practices for families including doors, windows, railings, pipe fittings, light fixtures, gusset plates, and built-up columns.

Information about creating object styles, fill patterns, and materials as well as some basic User Interface customization is included in the Appendix.

Chapter 1: Creating Custom Templates

- 1.1 Preparing Project Templates
- 1.2 Customizing Annotation Styles
- 1.3 Creating Title Blocks
- 1.4 View Templates
- 1.5 Settings for Mechanical and Electrical Projects
- 1.6 Settings for Structural Projects

Chapter 2: Schedules

- 2.1 Creating Schedules
- 2.2 Modifying Schedules
- 2.3 Graphical Column Schedules
- 2.4 Advanced Schedule Options
- 2.5 Creating Material Takeoff Schedules

Chapter 3: Custom System Families

- 3.1 Creating Wall, Roof, and Floor Types
- 3.2 Vertically Compound Walls
- 3.3 Stacked and Embedded Walls
- 3.4 MEP System Families

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Chapter 4: Family Concepts & Techniques

- 4.1 Introduction to Creating Families
- 4.2 Creating the Parametric Framework
- 4.3 Creating Family Elements
- 4.4 Additional Tools for Families
- 4.5 Creating Family Types
- 4.6 Visibility Display Settings
- 4.7 Overview of Family Creation

Chapter 5: Creating Specific Families

- 5.1 Creating In-Place Families
- 5.2 Creating Profiles
- 5.3 Creating Annotation Families
- 5.4 Working with Shared Parameters

Chapter 6: Creating Architectural Specific Families

- 6.1 Creating Custom Doors and Windows
- 6.2 Creating Angled Cornices and Copings
- 6.3 Creating Custom Railings
- 6.4 Families for Railings, Balusters, and Panels

Chapter 7: Creating MEP Specific Families

Chapter 8: Creating Structural Specific Families

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Appendix A Additional Management Tools

- A.1 Creating Object Styles
- A.2 Creating Fill Patterns
- A.3 Creating Materials
- A.4 Basic User Interface Customization

Autodesk Revit Certified Professional in Architectural Design Exam Objectives

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Day 3: Autodesk® Revit® Architecture Site and Structural Design

The main purpose of the Autodesk® Revit® Architecture software is to design buildings: walls, doors, floors, roofs, and stairs. However, architects also frequently need to add site and structural information. This training guide covers the elements and tools in the Autodesk Revit Architecture software that are used to create topographic surfaces for site work and to add structural elements.

For Site, students learn how to:

- Create topographic surfaces
- Add property lines and building pads
- Modify toposurfaces with subregions, splitting surfaces and grading the regions
- Annotate site plans and add site components
- Work with Shared Coordinates

For Structural, students learn how to:

- Create structural grids and add columns
- Add foundation walls and footings
- Add beams and beam systems
- Create framing elevations and add braces

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Chapter 1: Site Design

- Creating Topographical Surfaces
- Property Lines and Building Pads
- Modifying Toposurfaces
- Annotating Site Plans
- Site Components
- Shared Positioning

Chapter 2: Structural Tools

- Structural Basics
- Foundation Plans
- Framing Plans and Beams
- Framing Elevations and Braces

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Day 4: Autodesk® Revit® Architecture Conceptual Design & Visualization

As architects and designers start a project, they frequently think about the overall massing of a building or the area of the footprint. The Autodesk® Revit® Architecture software, using its powerful Building Information Modeling (BIM) engine, includes tools for creating mass elements that can be modified into many shapes. You can then apply walls, roofs, and floors to them to continue designing. You can also access space planning tools for setting up areas for rooms and applying colors to them to show the connections. For presentations, you can create and render perspective views.

The objective of the Autodesk Revit Architecture Conceptual Design & Visualization training guide is to enable students who have worked with Autodesk Revit Architecture to expand their knowledge in the areas of Conceptual Design, including massing studies, space planning, visualization, and rendering.

Students learn how to:

- Create In-Place Conceptual Mass elements and Conceptual Mass families
- Create building elements from massing studies
- Use Rooms and Areas for space planning and analysis
- Create perspectives, walkthroughs, and solar studies
- Understand the concepts of rendering and lighting

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Chapter 1: Massing Studies

- 1.1 Overview of Massing Studies
- 1.2 Placing Mass Elements
- 1.3 Creating Conceptual Massing
- 1.4 Setting Work Planes
- 1.5 Creating Mass Forms
- 1.6 Dynamic Editing for Conceptual Massing
- 1.7 Working with Profiles and Edges
- 1.8 From Massing to Building

Chapter 2: Space Planning & Area Analysis

- 2.1 Space Planning
- 2.2 Area Analysis
- 2.3 Creating Color Schemes

Chapter 3: Visualization

- 3.1 Perspectives
- 3.2 Creating Walkthroughs
- 3.3 Exploded Views
- 3.4 Solar Studies

Chapter 4: Rendering

- 4.1 Basic Rendering
- 4.2 Working with Lighting
- 4.3 Enhancing Renderings



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Appendix A Advanced Conceptual Mass Families

- A.1 Conceptual Mass Families

Appendix B Revit 2014 Certified Professional in Architectural Design Exam Objectives

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Cancellation Policy

The following cancellation policy shall apply to all training and consulting engagements including customised training solutions:

Redstack reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Redstack, Customer is entitled to a full refund. Redstack shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.

For Customer cancellations when written notice is received (i) at least ten (10) business days in advance of the class, Customer is entitled to a full refund of its payment or reschedule enrolment, (ii) less than ten (10) business days, Customer shall not be entitled to a refund, but shall receive a class credit to be used within three (3) months of the date of the original class.

Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Redstack

For all Training orders, cancellation notices must be submitted in writing. Redstack is not responsible for any error in the delivery of the email notice. In the event of any reschedule of any training or consulting services by Customer, Redstack will invoice Customer for all non-cancellable travel expenses.

For more information, contact us on 1300 667 263.